



Science Curriculum Overview

Person responsible: T Hardman

Intent

At Embsay C of E (VC) Primary School, we recognise the importance of science in everyday life and as a core National Curriculum subject, we give the teaching and learning of Science the prominence it requires.

We believe that every child should learn about science in a way that values and encourages their natural curiosity, enthusiasm and interest. They will be encouraged to ask and answer questions, explore and make connections in order to extend their scientific knowledge and conceptual understanding of Biology, Chemistry and Physics. Through the 5 different types of scientific enquiries, the children will develop the essential scientific enquiry skills as well as deepen their knowledge and understanding, helping them to learn more about the world around them and how it works. Active learning is used throughout the school, utilising both the indoor and outdoor environments. We also believe it is important that the children are able to see the relevance of science in their own lives, the modern world around them and imagine future science related careers.

Implementation

Our Science Principles:

At Embsay, great Science means:

- Valuing and encouraging children's curiosity, enthusiasm and interest
- Working well together – collaborating on practical tasks
- Asking and answering questions, making connections and wanting to find out more, thus extending knowledge and understanding
- Active learning using good quality resources and both the indoor and outdoor environments
- Regular opportunities for enrichment including events, workshops, trips, visitors to school and homework projects
- Teachers who provide interesting and inspiring activities, work alongside children to support their learning and use a range of assessment strategies to inform their next steps



- Children confidently using accurate scientific vocabulary in context and applying science skills within their practical work
- Raising awareness of the use of Science in the modern world and the possibility of Science being a part of future careers
- NYCC Teaching and Assessment Scheme of Learning (NYSSoL) used as a starting point for planning and assessment; adapted and supplemented to suit needs and interest of children; EMBSAY version of planning includes Embsay Science Principles
- Year group topics taught are those set out in National Curriculum Programmes of study.
- Skills Progression for all science topics and working scientifically show coverage, prior learning and scientific vocabulary to be used for topic
- Working scientifically is taught through, and clearly related to, the science topic being taught
- The 5 types of scientific enquiry are taught in all year groups over the course of the year and are matched to complement the topic being taught
 1. Observing changes over time
 2. Noticing patterns
 3. Grouping and classifying things (noticing similarities and differences)
 4. Comparative and fair testing
 5. Finding things out using secondary sources of information (researching)
- Science is taught in weekly discrete lessons equivalent to 1 hour (KS1) and 2 hours (KS2) per week
- KS2 use workbooks to showcase their learning and evidence.
- KS1 use Big Books for their work and evidence

Impact

Science progress at Embsay, is measured through the child's ability to obtain sustainable knowledge, remember more and explain more. Our successful, consistent approach results in fun, engaging, high-quality Science education that provides children with the foundations and knowledge for understanding the world. This is evident in pupils' work, photos, and displays.

Through a variety of well-designed and well delivered Science lessons, workshops, trips and interactions with experts, children have the understanding that science has changed our lives and that it is vital to the world's future prosperity. Children are aware of the possibilities for careers in science, because of our community links and connection with national and local agencies such as the STEM ambassadors, Aire River Trust and Secondary Schools. This gives our children access to positive role models within the field of science from the immediate and wider local community. We also deliver "Learn together" experiences with parents.

In EY, children are assessed through observations. In KS1 and KS2, children are assessed against the NC core objectives stated on the knowledge organisers for each half term. Teacher assessments are informed through carefully differentiated planning and teaching, targeted questioning, observations,



challenges and next steps. Knowledge and skills are assessed through teacher assessments evidenced through pictures, observations pupils' work in books, quizzes and next steps.

Monitoring and evaluation of the impact on children's learning includes regular monitoring of books by the subject coordinator, learning and environment walks, pupil voice as well as progress meetings with each classroom teacher.

Providing equal opportunities for all the children is at the heart of teaching practice at Embassy Primary School. Activities are differentiated to ensure all the children, including PP, SEND and low attainers needs are met.